Quick Facts about the Pesticide Data Program (PDP)

History

- USDA started PDP in May 1991 to test commodities in the U.S. food supply for pesticide residues.

- PDP has tested over **70 different commodities**: fresh/frozen/canned fruit and vegetables, fruit juices, dairy products, grains, corn syrup, nuts, honey, poultry, beef, pork, bottled water, private well water, and municipal drinking water.

- PDP has tested for more than **440 different pesticides**: insecticides, fungicides, herbicides, and growth regulators.

Sampling Operations

- PDP samples are collected by **10 participating States**, which represent about **50 percent** of the Nation's population and all regions of the country.

- Samples are collected **close to the point of consumption**. Collection at terminal markets and large chain store distribution centers allows the capture of sample identity data, takes into account pesticide degradation during transit and storage, and provides data on residues from postharvest applications of fungicides and growth regulators.

- **Sample sizes** for all fresh fruit and vegetables are 3 to 5 pounds; processed products are 1 to 3 pounds; milk, corn syrup, and juices are 1 quart; and grains, poultry, and beef are 1 pound.

- For some commodities (such as grains, poultry, and beef), **Federal personnel** perform sample collection because of access and expertise in product collection, packaging, and shipping.

- The number of samples to be collected is **apportioned** according to State **population** or commodity **production** figures.

- Samples are **randomly chosen** without regard for commodity origin or variety. Samples reflect what is typically available to consumers throughout the year.

- PDP's statistically-reliable sampling protocol is designed to select random samples that best represent pesticide residues in the food supply to allow for **realistic estimates** of **exposure** to these chemicals.

- All participating States, except California, **ship samples** to a single laboratory for dedicated commodity analysis. All California samples are tested at the California lab.

- PDP maintains **Standard Operating Procedures (SOPs)** designed to provide criteria to State samplers for site selection and specific instructions for sample selection, shipping, and handling.

- Support and oversight for all sampling operations is provided by USDA's National Agricultural Statistics Service (NASS).

- Detailed information about PDP sampling operations can be found in **Section II** of the **PDP 2006 Annual Summary**. An electronic version of the 2006 Annual Summary is available on the PDP Web site.

Laboratory Operations

- Analytical services are provided by **ten State** and **two Federal** laboratories. Participation as a contributing laboratory is **voluntary** and is funded through a Cooperative Agreement between the laboratory and USDA.

- Upon receipt, samples are visually **examined** for acceptability and are **discarded** if determined to be inedible (decayed, extensively bruised, or spoiled).

- Accepted samples are prepared (washed with inedibles removed) **emulating consumer practices**. All sample preparations are controlled by program-wide Standard Operating Procedures (**SOPs**) that **ensure consistency** between laboratories.

- Samples are mixed or **homogenized** into one representative **composite** sample.

- Residues are isolated from composite samples using **various extraction and clean-up** procedures. Extracts are then ready for instrumental analysis.

- PDP also conducts special surveys on **single-serving** food items to support acute dietary risk exposure studies.

- PDP Laboratories continuously evaluate and utilize state-of-the-art instrumental systems when conducting initial **identification and quantification** of pesticides.

- All extraction **methods** and **instrumental systems** are independently **validated** by the laboratory performing the analysis.

- PDP requires continuous **quality assurance** (QA) controls and on-site monitoring by independent QA officers to ensure the reliability of PDP data. Performance **equivalency** of the participating laboratories is monitored by a program-wide **check sample program**.

- All **residues** initially identified are **verified** using various forms of mass spectrometry, atomic emission detectors, or alternate detection systems.

- PDP laboratories also report **non-detects** for all pesticides screened, with corresponding reference Limits of Detection (LOD).

- Detailed information about PDP laboratory operations can be found in **Section III** of the **PDP 2006 Annual Summary**. An electronic version of the 2006 Annual Summary is available on the PDP Web site.

Database Management & Reporting

- PDP maintains an **electronic database** which serves as a central repository for its residue monitoring data. The data captured and stored in the PDP database include product information, residue findings, and process control recoveries for each sample collected and analyzed, plus fortification results for each set of samples.

- Data for each **calendar year** are stored in a separate database structure, allowing for easier administration and reporting of data.

- PDP utilizes a customized Web-based **software application** package that provides participating laboratories with the ability to **enter the PDP data** into interactive data entry screens using just a Web browser and **Internet** access. The data are stored directly into a central database that resides in Washington, D.C.

- Ad hoc queries and customized reports are generated in response to **data requests** from government agencies and the public sector.

- PDP calendar year **databases** are available for download at from the PDP Web site.

- PDP has published **Annual Summary** reports to present program findings for calendar years 1991 through 2005.

- Detailed information about PDP database management and reporting activities can be found in **Section IV** of the **PDP 2006 Annual Summary**. An electronic version of the 2006 Annual Summary is available on the PDP Web site.